The explosive to be used is Irecoal D 378 permissible explosive, an explosive which uses a non-nitroglycerin base gel dynamite. This explosive is specifically designed for use in drillhole patterns, especially when shooting off solid. Ireco electric 25 ms delay detonators will be used to delay the holes in a pattern which will contain the shot within the cut area created by the previous shot. 1.3 pounds of explosive per each hole will be used, providing a powder factor of 1.2. The following standards will be maintained for all blasts.

Airblast Limits and Ground Vibration (R645-301-524.600). Airblast and ground vibration limits at the location of any building structure outside the permit area will not exceed those outlined in R645-301-524.621 and R645-301-524.642. In an effort to minimize airblast and fly rock, a satchel-type explosive and mud-packing will not be used.

## **Pre-Blast Survey**

Since each blast will not exceed 5 pounds of explosive weight, the requirements of a pre-blast survey are not applicable to the blasting plan. During the construction of the #4 Mine portals blasting will exceed 5 pounds, this is described in attachment A.

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